Possible Association of Posttraumatic Stress Disorder With Cognitive Impairment Among Older Adults

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It is well documented that persons who have a history of severe and prolonged trauma, such as exposure to combat, captivity, or torture, may continue to experience physical and mental health problems as they age (1). Possible psychiatric consequences include depression, anxiety, and symptoms of posttraumatic stress disorder (PTSD). Given the neurochemical, neurological, and neuropsychological impairments that appear to accompany PTSD (2), several investigators have suggested that severe and prolonged trauma or a history of PTSD may place aging individuals at increased risk of cognitive decline and onset of dementia (3–7). There are a number of plausible explanations for the association besides the obvious one of trauma causing both PTSD and vulnerability to subsequent cognitive impairment. PTSD may mediate the effects of earlier trauma on cognitive impairment, and cognitive impairment may disinhibit symptoms of PTSD that might have been less apparent or more controlled for years.

Epidemiologic information is not yet available on the prevalence of past and present traumatic exposure, PTSD, and the relationship to cognitive impairment among older adults. Nonetheless, there is a clinical basis to alert mental health professionals to issues in the recognition and management of PTSD among cognitively impaired patients (5–8).

Preliminary evidence

Persons who have experienced prolonged and extreme stress, such as former prisoners of war (POWs) and survivors of Nazi concentration camps, may demonstrate concomitant neuropsychological disorders decades after the traumatic experience, with a possible increase in rate of cognitive decline and risk of dementia (9,10). A series of case studies documents this phenomenon (5–7). Johnston (5) presented three cases of combat veterans whose recent cognitive decline appeared to increase war-related nightmares, physiological hyperreactivity, and anxiety in response to trauma cues. Similarly, patients with a history of combat trauma who were asymptomatic or whose symptoms were under control until the onset of cognitive impairment (6) have been identified, suggesting that cognitive decline may disinhibit PTSD symptoms. A third case series included a Holocaust survivor and an individual who survived the sinking of the *Titanic*, whose PTSD symptoms worsened after the onset of dementia (7).

A small study from a geropsychiatric inpatient unit found that patients with a diagnosis of dementia and comorbid PTSD did not differ significantly in their clinical presentation from patients with a diagnosis of dementia without PTSD (11). However, patients with dementia who had more severe trauma—for example, ex-POWs—displayed greater behavioral disturbances, such as physical aggression, wandering, or general confusion, than those who had less severe trauma. In this study PTSD was examined categorically as a syndrome rather than dimensionally as symptoms. The possible clinical implications of these findings are that patients with severe traumas and PTSD symptoms may have higher rates of disruptive agitated behaviors. These mental sequelae necessitate specialized health services.

Other clinical observations

Older adults with both PTSD and cognitive impairment may encounter a range of trauma-related stimuli, or "triggers," that may elicit PTSD symptoms and general distress; in combination with cognitive impairment, these triggers may lower these individuals' threshold for response and disinhibit subsequent problem behaviors (8). Such cues can include any aspects of the environment that are reminders of traumatic experiences. Depending on the traumatic experience, these triggers may include television news coverage of past or current traumatic events, the sounds of other people in distress,

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and loud noises. Vulnerable individuals may misinterpret neutral sensory stimuli as trauma related and they may be less capable of using avoidance strategies and thus more susceptible to reminders of a trauma (7). For example, waking older trauma survivors who have comorbid PTSD and cognitive impairment for mandatory routine checks in hospitals and nursing homes or to administer medication may startle them and cause them to strike out.

PTSD symptoms and distress among trauma survivors may also be triggered by a range of interpersonal behaviors, such as care providers' thoughtless use of authority or control. For example, for women who have experienced captivity or violent assault, the presence of unfamiliar men or physical contact by male health professionals may bring up unresolved trauma-related distress. Examples of other possible triggers of negative reactions and clinical interventions have been reported (8).

Clinically, one might speculate that older adult trauma survivors who were primarily the victims of aggression—for example, Holocaust survivors and emigrants—may evidence an increase in nonaggressive agitation, such as pacing or wandering, whereas those who not only were victims but also were aggressors themselves—for example, combat veterans and ex-POWs—may show an increase in both physically aggressive and verbally agitated behaviors, such as hitting, kicking, biting, and shouting.

What psychiatry can offer

Geriatric psychiatrists can take a leadership role in providing optimal mental health services for older survivors of trauma. One way to accomplish this goal is through ongoing and routine education and training of interdisciplinary team members—such as primary care physicians, social workers, and frontline nursing staff—related to a possible association between past trauma, PTSD, cognitive impairment, and behavioral problems among older adults. Health care professionals who work with older trauma survivors usually lack the training or confidence to deal with the effects of trauma. Many are not prepared to recognize PTSD. Most have received no or little information about the effects of trauma in general, and the personal trauma history of the patients for whom they provide care. PTSD, when present, may be mistaken for more familiar problems encountered among older adults, such as depression, psychosis, and other anxiety disorders.

Improving recognition of PTSD among cognitively impaired older adults will involve training a range of health care professionals in taking trauma histories and assessing PTSD symptoms. If the older trauma survivor is able to provide relatively reliable answers, use of the primary care PTSD screen may be helpful (12). The probe for this screen is the question, "In your life, have you ever had any experiences that were so frightening, horrible, or upsetting that, in the past month, you (a) had nightmares about it or thought about it when you did not want to? (b) tried hard not to think about it or went out of your way to avoid situations that reminded you of it? (c) were constantly on guard, watchful, or easily startled? and (d) felt numb or detached from others, activities, or your surroundings?" (12).

People who respond "yes" to two or more of these questions should receive further assessment. If the geriatric health professional is unable to fully recognize the nuances of trauma-related distress, he or she should refer the patient for a diagnostic evaluation and appropriate recommendations for treatment interventions. If the patient is unable to provide reliable answers about traumatic exposure or psychiatric distress, psychiatrists can enlist family members in obtaining corroborating information from collateral sources, such as searching medical or military service records.

Psychiatry can also take a leadership role in training interdisciplinary staff and formal and informal caregivers in the clinical management of PTSD and related behavioral problems. A chief strategy may be the identification and subsequent removal, avoidance, or minimization of traumatic cues. For example, military attire and the presence of related symbols can be triggers for combat veterans, and these cues can be removed from a patient's environment (8).

Efficacious treatments for younger adults have often focused on repeated exposure to images or memories associated with the traumatic events (13). Because the physical health of older adults is often compromised and direct trauma processing can produce strong physiological effects—such as changes in heart rate and respiration—that may exacerbate existing health conditions, the benefit of using exposure in the treatment of older adults with PTSD has been questioned (14). For example, providing detailed accounts of traumatic life experiences through such methods as reminiscence or review therapies may be contraindicated for Holocaust survivors (15).

In addition, the patient's level of cognitive impairment is a key factor in the choice of management approaches. With minimal cognitive impairment, interventions may be similar to those used in PTSD treatments: psychoeducation about PTSD, help with more effective coping with symptoms, and improvements in social support. However, declining cognitive abilities may not support the use of self-management strategies that require retention of new information about PTSD and implementation of recommendations for effective coping. Nonpharmacologic interventions, such as providing social support or engaging in positive activities, may be effective in reducing problem behaviors (16). The geriatric psychiatrist can be an essential consultant to the primary care physician in the selection of appropriate type, dosage, frequency, and duration of medications available for symptom relief in conjunction with nonpharmacologic interventions as needed.

Geriatric psychiatrists are crucial in facilitating education by encouraging less blaming of the patient for cognitive or behavioral problems that might be explained by a history of trauma or PTSD. PTSD-related education for health professionals who work with cognitively impaired older adults may lead not only to an earlier identification of patients at risk but also to an increase in empathy for pa-

tients and the chance to provide professionals with an armamentarium of strategies for effective management. For example, helping health professionals recognize that a patient with both PTSD and cognitive impairment is aggressive partly because of traumatic experiences may make the staff less likely to take the behavior personally, potentially preventing unproductive responses. Psychiatrists can help educate staff in long-term-care settings and family members by providing inservices in which they review types of trauma and expected behaviors. Videotapes are available to facilitate these discussions (17,18).

PTSD-related education will be welcomed by health care providers who work in long-term-care settings if the administrators understand that related behavioral problems such as agitation often frustrate staff and lead to staff burnout. These behaviors require excessive staff time, are potentially dangerous, and direct attention away from other patients. The behaviors can also lead to premature placement in a long-term-care facility by family members.

Conclusions

Potential links between PTSD, cognition, and behavioral problems in late life are worthy of clinical attention. Detection and diagnosis of PTSD among cognitively impaired older adults is a challenge. These older individuals may be overlooked, because their symptoms may be confused with dementia or other conditions, such as psychosis. It is essential to sensitize care providers, both professional and nonprofessional, in the recognition of this potential association. Corroborating information for the assessment of impaired older adults should include existing medical records and collateral reports from family members. Most effective psychiatric interventions in long-term-care settings combine training and education of staff with consultation and feedback on clinical practices (19). There is a need to increase the availability of PTSD services for aging populations, particularly within long-term-care institutions, and especially those with a high concentration of older veterans or Holocaust survivors (20). ♦

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